### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-018978 Address: 333 Burma Road **Date Inspected:** 25-Dec-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Mr. Oiu Wen **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** OBG/Tower

### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Baskar Govindarajan, was present during the times noted above for observations relative to the work being performed.

Bay #14

This QA Inspector observed the following work in progress

Orthotropic Box Girder (OBG)

Flux cored Arc welding (FCAW)

Weld joint # 008 located on Hinge plate to longitudinal diaphragm, SEG 3020X in segment 14W. Welder is identified as 045227. ZPMC Quality Control (QC) Inspector is identified as Zhu Lin. The welding variables recorded by QC appeared to comply with the WPS – B –T -2233-Esab.

Weld joint # 169 located on Hinge plate to longitudinal diaphragm, SEG 3020L in segment 14W. Welder is identified as 066239. ZPMC Quality Control (QC) Inspector is identified as Zhu Lin. The welding variables recorded by QC appeared to comply with the WPS – B –T -2233-Esab.

Weld joint # 024 located on Bottom plate to Longitudinal diaphragm SEG 3020AA in segment 14 W. Welder is identified as 201215. ZPMC Quality Control (QC) Inspector is identified as Zhu Lin. The welding variables

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recorded by QC appeared to comply with the WPS – B –T -2232-Esab.

Shielded Metal Arc Welding (SMAW)

Weld joint # 034 located on Bottom plate to Longitudinal diaphragm SEG 3020Y in segment 14 W. Welder is identified as 047866. ZPMC Quality Control (QC) Inspector is identified as Zhu Lin. The welding variables recorded by QC appeared to comply with the WPS – B –P -2212.

Weld joint # 003 located on Side plate SP3103A to Side plate SP3109A, AH 3001 in segment 13AW. Welder is identified as 066261. ZPMC Quality Control (QC) Inspector is identified as Shao Jia Yuan. The welding variables recorded by QC appeared to comply with the WPS – B –P -2214 –TC –U4B –FCM -1.

Repair welding of Weld joint # 254 as per CRR no. B -CWR -2407 located on Segment 13CW Deck panel DP 3146 -001. Welder is identified as 045133. ZPMC Quality Control (QC) Inspector is identified as Shao Jia Yuan. The welding variables recorded by QC appeared to comply with the WPS – 345 –SMAW -2G (2F) -FCM – Repair.

Repair welding of Weld joint # 248 as per CWR no. B -CWR -2405, located on Deck panel DP 3133 -001 in segment 13CW. Welder is identified as 066398. ZPMC Quality Control (QC) Inspector is identified as Shao Jan Yuan. The welding variables recorded by QC appeared to comply with the WPS – 345 –SMAW -2G (2F) -FCM – Repair.

Submerged Arc Welding (SAW)

Weld joint # 001A located on Floor beam FB3325 with SEG 3020A for segment 14W. Welder is identified as 045265. ZPMC Quality Control (QC) Inspector is identified as Shao Jia Yuan. The welding variables recorded by QC appeared to comply with the WPS – B –T -2221 –B –L2C-S.

Ultrasonic Testing (UT)

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 07924.

This QA inspector performed UT of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report (TL 6027) for this date. The member is identified as OBG Side Barriers and U rib splice plate at Bay #28. The weld designation reviewed as follows:

SA3116B-001 – Jt. nos -004, 005 (U rib splice plate)

SA3116B-007 – Jt. nos -004, 005 (U rib splice plate)

SA3054A-001 –Jt. nos -001, 002 (U rib splice plate)

SA3054A-001 –Jt. nos - 001, 002 (U rib splice plate)

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E5-SB21-001 – Jt. no. -019 (Side barrier)

E5-SB13-081 - Jt. no. -081 (Side barrier)

E5-SB20 -001 - Jt. no. -050 (Side barrier)

For further information see below pictures:-

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.





## **Summary of Conversations:**

No relevent Conversations.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Thomas Hu (15002048250), who represents the Office of Structural Materials for your project.

Inspected By:	Baskar, Govindarajan	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer